

diameter contact hole being completely filled with a plug of a refractory conductive material, and said large-diameter contact hole being partly filled by said refractory conductive material which covers a sidewall surface of said large-diameter contact hole to below the upper end of said large-diameter contact hole by a predetermined distance, said refractory conductive material being simultaneously deposited in said small diameter hole and said large diameter hole, a wiring conductor layer being deposited on said insulator film to cover a top surface of said plug of said refractory conductive material, and to fill at least in part space remaining in said large-diameter contact hole thereby to cover a bottom of said large-diameter contact hole and said refractory conductive material within said large-diameter contact hole.

#### REMARKS

A minor clerical error has been corrected in the specification, without adding any new matter.

Independent claim 1 has been amended to better define Applicant's claimed invention, and to further distinguish Applicant's claimed invention from the prior art. More particularly, independent claim 1 has been amended to specify that the refractory conductive material is simultaneously deposited in the small diameter hole and the large diameter hole. It is submitted that none of the art of record, alone or in combination, discloses or suggests a semiconductor device having both large and small diameter holes, simultaneously depositing refractory conductive material in both the

small diameter holes and large diameter holes in order to achieve good contact formation, etc., as required by Applicant's claim 1, as amended.

In rejecting claims 1-4, 7 and 8 as obvious from Roberts et al in view of Miller et al or as obvious from McDavid in view of Miller et al, and in rejecting claims 5, 6, 9 and 10 as obvious from McDavid and Roberts et al in view of Miller et al, the Examiner acknowledges that neither primary reference Roberts et al or McDavid teach or suggest a semiconductor device including both a large-diameter contact hole and a small-diameter contact hole as required by Applicant's independent claim 1. However, the Examiner dismisses this distinction on the basis that "since both large and small holes are shown in the prior art, it is obvious to combine the two techniques and provide a contacting capability with the widest applicability." In making this suggestion, the Examiner ignores the fact that a device having only small holes or a device having only large holes would not experience technical problems in terms of contact formation, etc. encountered when both large diameter and small diameter holes are present. The fact that the two techniques are separately known in the prior art does not make it obvious to combine the two techniques. Thus, it is clear the Examiner is employing hindsight, and is applying the teachings of the present invention to the prior art, to make out a case of obviousness.

Entry of the foregoing amendment and allowance of the application are respectfully requested.



In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account No. 08-1391.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Norman P. Soloway".

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**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231 on August 25, 1999, at Manchester, New Hampshire.

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